

26 September 1957

MEMORANDUM FOR: Secretary, IAC Ad Hoc Committee on Exchanges
FROM: Chairman, EIC Subcommittee on Industrial Machinery
and Equipment
SUBJECT: Soviet Long Term Exchanges Proposal

1. The proposal of the Soviet Ambassador for a long term exchange of technical specialists, referred to this Subcommittee by your memorandum of 18 September 1957, was considered by the Subcommittee at its meeting on that date, with respect to the industries falling in its area of interest. While opinion in the group was not unanimous, it was the majority conclusion that the Soviet proposal affords a considerable net [redacted] advantage to the US with respect to the machine tool industry, and to a slight extent in the automobile and farm machine construction industries. Net technological advantage would accrue to the Soviets. No conclusions were attempted with respect to industries producing instruments and means of automation since it is believed that Soviet interest in these areas is principally in the electronic components, and since it is understood this portion of the proposal will be commented on by the Subcommittee on Electronics and Telecommunications. It should be noted that the opinions expressed by the Subcommittee members were the product of their technical and [redacted] experience and do not necessarily reflect the positions of the Agencies represented. The following comments relate to the specific industries considered.

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2. Machine Tool Industry

a. US [redacted] Gain 25X1X1

While the Soviets publish statistics on machine tool production, little is known of the product mix, and some doubt persists as to the limits of tool types included in the published figures. Also, the degree of development of production of equipment for metal chip removal by spark erosion methods, rather than by cutting tools, is an important gap. This advanced technique is known to be the subject of intensive work in the USSR. It was suggested that a judicious selection of Soviet production locations might produce valuable information, and that continued association for several months with the USSR industry would be more productive than short conducted tour visits.

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b. Soviet [REDACTED] Gains 25X1X1

As distinguished from the organized, centrally directed practice of the USSR, the US machine tool industry is notable individualistic, separate plant organizations making use of widely varying techniques and methods. Procedures observed at one location are not necessarily representative of the industry. This tends to minimize the value of industry [REDACTED] to be gained in the US, and experiences in different American areas of the industry may not tend to be confirmative.

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c. US Technological Gains

Only limited technological gain could be expected to accrue to the US, except with respect to the development of spark erosion equipment. Interest would be felt in the design of large aggregates, and in the production of automatic lines.

d. Soviet Technological Gains

An extended period of association with the US industry would in all probability provide access to technological information that would be valuable to the Soviet industry. In this sense the proposal for long term exchange favors the Soviets. American trade journals, however, are readily available to the USSR, and contain quantities of technological information on the US industry's practices. Trade secrets, as to certain techniques, exist in the US machine tool industry and are guarded jealously. It is not expected that American machine tool manufacturers would be willing to expose their trade secrets, and probably their research work, to visitors.

e. Summary (Machine Tool Industry)

(1) It was the majority opinion that an extended period of association with the USSR machine tool industry would, owing to its organized and directed character, provide valuable and accurate information on the whole industry to qualified American participants visiting carefully selected locations. Belief was expressed that American producers would be willing to participate, expecting some degree of technological benefit. It was felt that the Soviets would benefit technologically by reason of the "training course" effect of a long term visit, but that net advantage would still accrue to the US.

(2) Reservations were expressed by representative of CIA/ORR who indicated the belief that US producers would find little incentive to participate in a long term arrangement, and that the

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Soviet technological advantage would increase sharply by reason of extended association, as compared to the short visits involved in past practice.

3. Automobile Industry

a. US [REDACTED] Gain

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A modest [REDACTED] gain to the US may be practicable, 25X1X1 particularly regarding truck manufacture, and extending to parts procurement practices, assembly procedures and production rates, and war production potential.

b. Soviet [REDACTED] Gain

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It seems likely that the principal Soviet [REDACTED] gain might lie in the possibility of the assessment of the US industry's ability to convert to and produce modern military weapons. It may not be likely that present military production would be observed, but the relative uniformity of US machining and assembly operations in this industry would facilitate industry wide evaluation.

c. US Technological Gain

Little probability of technological gain to the US is observed.

d. Soviet Technological Gain

A broad technological advantage would accrue to the Soviets in the US automobile industry where competitive conditions have inspired rapid progress in technical processes. However, the probable value of such information to the USSR, measured by the ability to apply it in practice, might have limits, since American practices are geared to a much higher volume of production than is likely to be achieved in the USSR for some time to come.

e. Summary (Automobile Industry)

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While information [REDACTED] interest regarding the USSR industry might be procurable, it seems likely the over-all net advantage would fall to the Soviets. In view of probable slight expectation of technological gain, the attitude of American manufacturers toward a long term assignment of trained personnel to such a project is questionable.

4. Farm Machinery Industry

a. US [REDACTED] Gain 25X1X1

During World War II the Soviet farm machinery producing plants in many cases engaged in production of munitions and other war material. Capability of the industry for future use in this respect would probably be a primary [REDACTED] goal. Probability of reliable evaluation might be subject to question. 25X1X1

b. Soviet [REDACTED] Gain 25X1X1

The products of the US industry are undoubtedly well known to the Soviets. The industry's war potential could possibly be a Soviet intelligence target. It is difficult to assess possible USSR gain in this area.

c. Soviet Technological Gain

As a result of recent visits of Soviet agricultural experts to US farm machinery producing plants, it seems likely that technological processes briefly observed are the target of the USSR in this industry. The USSR would gain a broad advantage by placing its representatives in essentially a training status in the American industry. Such benefits could probably be applied within a reasonable time to Soviet production. As in the machine tool industry, certain trade secrets in the way of processes would probably be "off limits," but enough processes would probably be observable to lead to the possibility of considerable improvement of the less developed USSR industry.

e. Summary (Farm Machinery Industry)

The attitude of American producers could be questionable owing to lack of probable gain to them. Over-all net advantage would probably accrue to the Soviets because of the probability of broad technological gain.

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